

Frontier Markets: Investment Rationale, Accessibility and Risks

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- ❑ Frontier markets are the subset of emerging markets deemed to be relatively small and illiquid, even by emerging markets standards.
- ❑ In the past, most frontier markets were relatively inaccessible to foreign investors. However, several frontier markets have become more investable, with lower restrictions on foreign ownership and increased liquidity in local stock markets.
- ❑ There are economic and investment rationales for considering dedicated allocations to frontier markets.
- ❑ The economic rationale centers on the growth of these economies. Frontier markets have experienced strong growth in recent years and are predicted to continue to do so in the future. These countries have less mature economies and capital markets, leaving much room for growth.
- ❑ The investment rationale is based on several trends occurring in the global markets. Many traditional emerging markets, which have historically been attractive to investors in part because of their low correlation with developed markets, have increasingly moved more in line with developed markets, thus decreasing the benefits from diversification. Frontier markets, however, retain low correlations with developed markets and present strong diversification possibilities.
- ❑ While the rationale for frontier market investments is attractive, these markets remain prone to shocks associated with political upheavals and economic risk. Further, like most investment themes, frontier market investing is prone to corrections following reversals in investor sentiments.
- ❑ The S&P New Frontiers Index is an investable index comprised of tradable, liquid stocks domiciled in frontier markets.

Investing in Frontier Markets

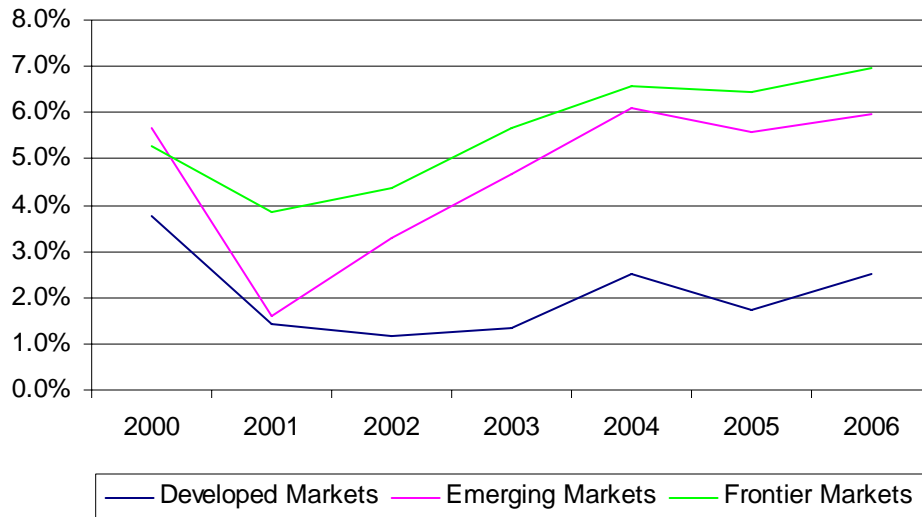
Frontier markets are the subset of emerging markets characterized as relatively small and illiquid, even by emerging markets standards. For the purposes of this paper frontier markets are considered to be all emerging markets not included in the S&P/IFCI Emerging Markets Index, which comprises the investable subset of emerging markets. Unsurprisingly, it is often very difficult, or in some cases virtually impossible, for foreign investors to access these markets for several reasons, including foreign investment restrictions, high capital gains taxes and a lack of liquid currency markets. However, this situation has improved in recent years with several frontier markets now reasonably accessible to foreign investors. In recent years, these markets have been characterized by increasing size and liquidity as well as, in some cases, by decreasing foreign investment restrictions. For the purposes of this paper, unless stated otherwise, the following eleven countries represent the frontier markets – Bahrain, Bulgaria, Colombia, Croatia, Jordan, Oman, Pakistan, Romania, Sri Lanka, the United Arab Emirates (U.A.E.) and Vietnam. These markets are generally accessible to foreign investors and local listings from these markets are eligible for inclusion in the S&P New Frontiers Index.

There are two rationales for investing in frontier markets. The first is concerned with the size and growth of frontier market economies. The second is based on the diversification possibilities presented by frontier market investments.

The Economic Rationale

The economic rationale for investing in frontier markets is based on the growth and potential development of these markets. Frontier market economies have been growing at a brisk pace since 2000. Exhibit 1 shows average real GDP growth in frontier, emerging and developed markets beginning in 2000. Over this time, frontier market GDP has grown at an annualized rate of 5.6%, outpacing the growth of both emerging and developed markets. In fact, frontier market GDP growth has been higher than that of emerging and developed markets for every year since 2001.

**Exhibit 1: Real GDP Growth of Frontier Markets
Versus Emerging and Developed Markets**



Source: Standard & Poor’s calculations from the April 2007 World Economic Outlook Report of the IMF. Percentages are calculated as a simple average of all countries in each market type. Frontier markets represent the eleven countries specified above, emerging markets represents all countries contained in the S&P/IFCI Emerging Markets Composite and developed markets represents the G7 countries.

Despite brisk growth during this decade, frontier market economies remain very small compared to developed market economies and even to other more advanced emerging market economies, thus presenting strong potential for continued high economic growth in the future. For example, as displayed in Exhibit 2, GDP per capita in frontier markets is only a fraction of that of developed markets and is 20% less than GDP per capita in more advanced emerging markets. In fact, the GDP per capita measurement for frontier markets is somewhat skewed by oil rich countries such as Bahrain and the U.A.E. Excluding these countries GDP per capita would be under \$1,500.

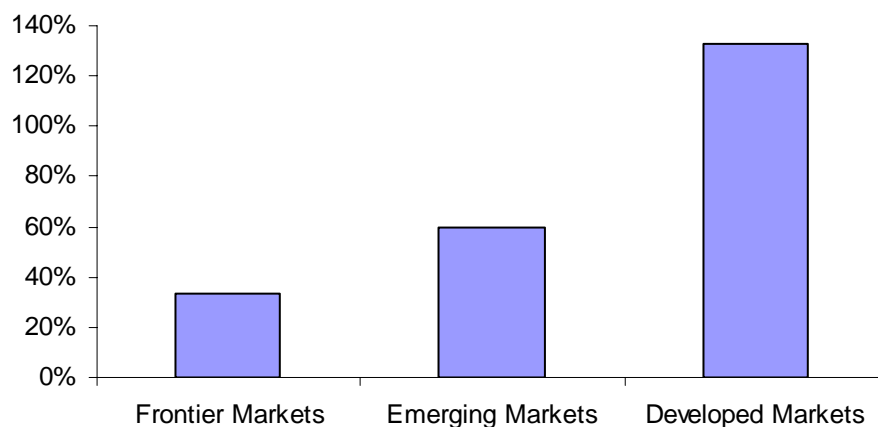
Exhibit 2: GDP Per Capita US\$

GDP Per Capita	
Developed Markets	\$ 37,530.84
Emerging Markets	\$ 2,390.90
Frontier Markets	\$ 1,845.61

Source: Standard & Poor’s calculations from the 2007 World Bank World Development Indicators. Data as of 2005.

Frontier markets remain less developed in terms of financial markets as well. Despite recent strong growth in the size of frontier economy stock markets these markets remain smaller as a percentage of GDP than those of developed markets or more advanced emerging markets. Exhibit 3 shows the median market capitalization as a % of GDP for all countries in the three market categories.

Exhibit 3: Median Stock Market Capitalization as a % of GDP



Source: Standard & Poor’s calculations from the 2007 World Bank World Development Indicators. Data as of 2005.

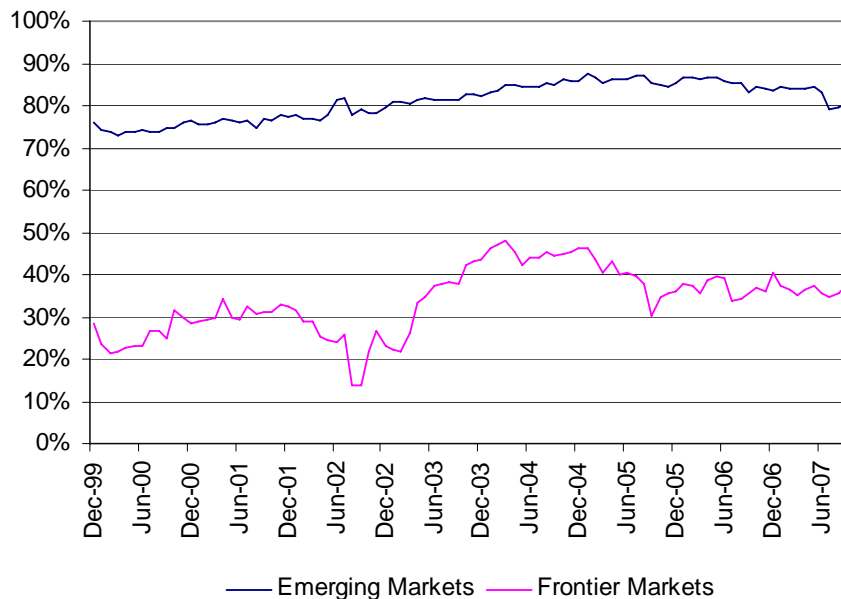
The Investment Rationale

The primary investment rationale for frontier markets is based on modern portfolio theory. Investors can decrease the risk in their portfolio and increase their reward-to-risk tradeoff through diversification. This is achieved by holding different assets that are not perfectly correlated. The less those assets are correlated, the greater the

potential benefit of diversification. The benefits of diversification have played a large part in the increase in emerging market investment. However, as emerging markets have grown over the years, and the economies of these markets have become further integrated in the global economy, emerging market stocks have become more correlated with developed market stocks, thus decreasing the potential benefits of diversification.

Frontier markets, on the other hand, are still relatively small and undeveloped by comparison and have retained the tradition characteristics of emerging markets. They have smaller stock market capitalizations relative to their economic size and their economies are less intertwined with global economic cycles. Thus, frontier market investments continue to have relatively low correlations with developed markets. This is demonstrated in Exhibit 4 through rolling two-year correlations with developed markets. The correlation between frontier and developed markets has remained well below 50%, while the correlation between emerging and developed markets has consistently been above 80%.

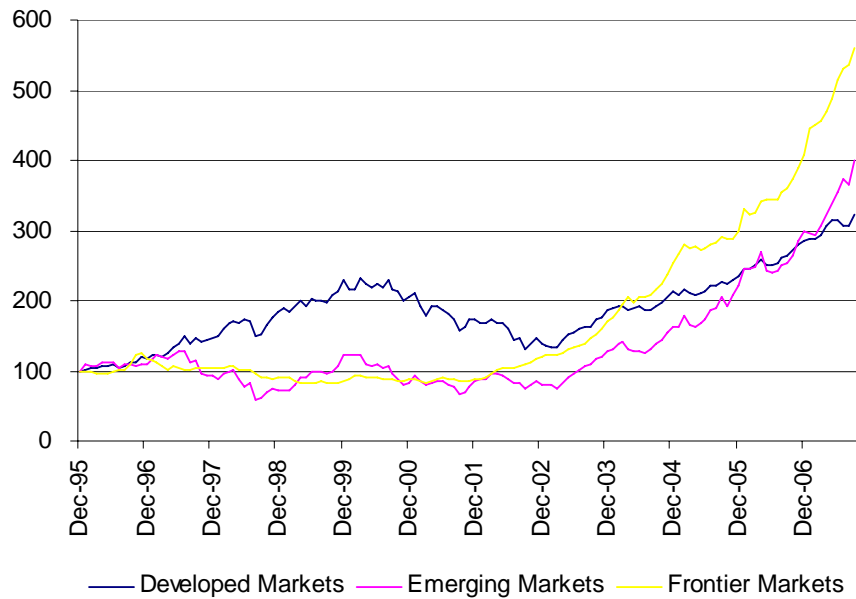
Exhibit 4: Rolling Four-Year Correlations Versus Developed Markets



Source: Standard & Poor’s. Emerging markets are represented by the S&P/IFCI Emerging Markets Composite and frontier markets by the S&P/IFCG Frontier Markets Composite.

The second investment rationale for frontier markets is based on the strong returns enjoyed by these markets over recent years. Frontier markets have consistently outperformed both emerging and developed markets since 1995. In particular, returns have been extremely strong over the past four years, coinciding with the strong growth in size and liquidity of these markets over that time.

Exhibit 5: Value of US\$ 100 Investment in Developed, Emerging and Frontier Markets.



Source: Standard & Poor's. Emerging markets are represented by the S&P/IFCI Emerging Markets Composite and frontier markets by the S&P/IFCG Frontier Markets Composite.

Accessibility

Frontier markets have become increasingly accessible to foreign investors, to the point where dedicating a significant investment to this space is feasible. There are several factors that determine if a market is accessible, including if it has low foreign investment restrictions, allows for easy capital entry and exit, does not have pernicious tax levels and has ample liquidity. There are eleven markets for which local listings are eligible for inclusion in the S&P New Frontiers Index - Bahrain, Bulgaria, Colombia, Croatia, Jordan, Oman, Pakistan, Romania, Sri Lanka, the U.A.E. and Vietnam. These markets tend to have few hurdles for foreign investors. All of these countries are considered to have relatively free entry for foreign investment and only Vietnam has some restrictions on repatriation of income and capital. Also, as shown in Exhibit 6, these markets have withholding tax rates that are lower than those in developed markets. Finally, these markets have comparable settlement cycles and foreign investment ceilings to larger emerging markets, as demonstrated in Exhibit 7.

Exhibit 6: Percentage Withholding Taxes in Frontier Markets

Market	Interest	Dividends	Long-Term Capital Gains
Bahrain	0	0	0
Bulgaria	10	7	0
Colombia	0	7	5
Croatia	15	0	20
Jordan	0	0	0
Oman	0	0	0
Pakistan	10	10	0
Romania	10	10	16
Sri Lanka	15	10	0
U.A.E.	0	0	0
Vietnam	10	0	28
Average	6.36	4.00	6.27
G7 Average	15.00	13.33	18.23

Source: Standard & Poor's Global Stock Markets Factbook 2007. Data are sourced primarily from information provided by stock exchanges and are verified with other independent sources, including the 2007 edition of the Ernst & Young Worldwide Tax Guide.

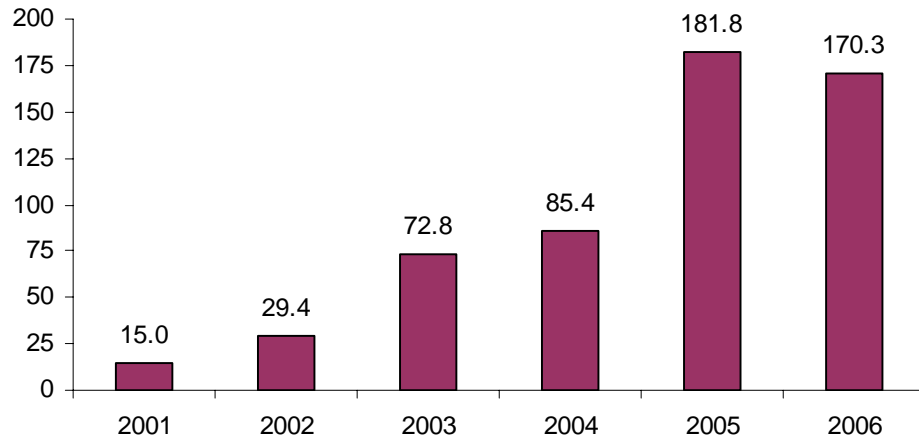
Exhibit 7: Investment Hurdles of Frontier Markets And Leading Emerging Markets

Market	Settlement Cycle	Foreign Investment Ceilings
<i>Frontier Markets</i>		
Bahrain	T+2	49% in general, 10% for a single entity
Bulgaria	T+2	100% in general
Colombia	T+3 to T+6	100% in general
Croatia	T+3	100% in general
Jordan	T+2	100% in general, with restrictions of 50% or 49% on certain sectors.
Oman	T+3	Up to 70% with some further restrictions at company level
Pakistan	T+3	100% in general
Romania	T+3	100% in general
Sri Lanka	Sales T+4 Purchases T+3	100% in general, with restrictions of 40% on certain sectors .
United Arab Emirates	T+2	49% in general, some individual companies may have different restrictions
Vietnam	T+3	49% in general, 30% for banks
<i>Leading Emerging Markets</i>		
Brazil	T+3	100% in general, restrictions on certain sectors
India	T+2	24% in general, different restrictions on certain sectors, 10% for a single entity
Korea	T+2	100% in general, restrictions on certain sectors
Mexico	T+2	Sector based restrictions, generally 49% of voting shares.
Russia	T to T+15	100% in general
Taiwan	T+1	100% in general, restrictions on certain sectors.

Source: Settlement cycle information from the State Street Guide to Custody in World Markets 2007. Foreign investment ceilings from Standard & Poor's Global Stock Markets Factbook 2007 and the State Street Guide to Custody in World Markets 2007.

Liquidity has increased tremendously in frontier markets over the past few years. This is most clearly shown by looking at total annual value traded in US Dollar terms. For several markets total value traded in 2005 has grown more than tenfold from value traded in 2001, including Bulgaria, Colombia, Jordan, Pakistan and Romania. Exhibit 8 shows the trend in value traded measured in billions of US\$ for nine of the eleven accessible countries for this time period. (The U.A.E. and Vietnam are excluded.) Total value traded has grown an incredible 1100% over the four-year period, or 87% per year. Turnover, as defined by value traded divided by market capitalization, has also increased strongly over this time period, from 37% in 2001 to 88% in 2005, further indicating that liquidity risk has decreased over time in these markets.

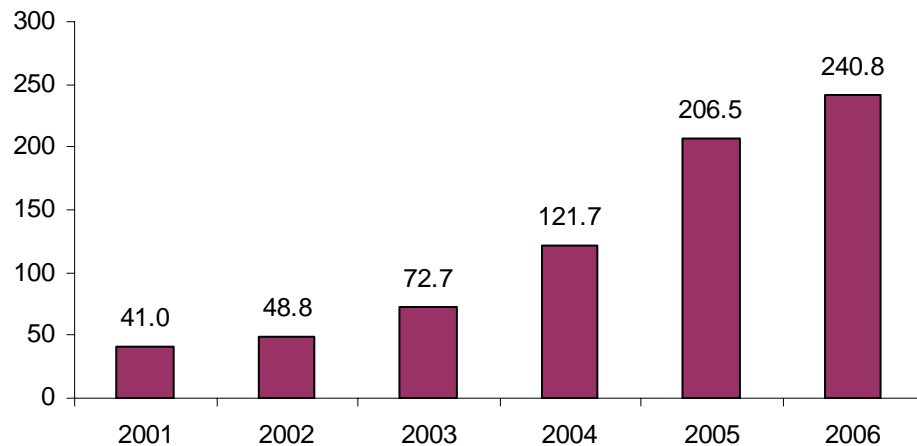
Exhibit 8: Frontier Markets Total Annual Value Traded (US\$ Billions)



Source: Standard & Poor’s Emerging Markets Database.

Unsurprisingly, the size and importance of capital markets in these countries has increased strongly over the last few years, as well, providing investors with greater investment opportunities in frontier markets. Exhibit 9 illustrates the growth in stock market capitalization for the same nine countries from 2001 through 2005. Market capitalization has more than quadrupled over this time, growing at an annualized rate of 50%. Also, the size of each country’s stock market as a percentage of GDP increased by an average of 62%, exhibiting that these economies are not only growing in size but are also developing a more advanced financial infrastructure.

Exhibit 9: Frontier Markets Total Stock Market Capitalization (US\$ Billions)



Source: Standard & Poor’s Emerging Markets Database.

The S&P New Frontiers Index

The S&P New Frontiers Index is an investable, replicable index comprised of the largest and most liquid frontier market companies. It includes both developed market listings of frontier market stocks, through ADRs and GDRs, as well as local listings on accessible frontier market exchanges.

Market Coverage: The S&P New Frontier Index aims to provide broad coverage of frontier markets that are not found in traditional emerging market funds, while maintaining full replicability. The universe includes stocks domiciled in any country not included in the S&P/IFCI Emerging Markets Index, which represents the most investable emerging market stocks found in traditional emerging market equity funds. To maintain investability, only stocks from the most accessible markets -- the eleven markets listed above -- are eligible through local market listings. However, to provide as much breadth as possible, stocks from all other frontier markets, such as Cambodia, Kazakhstan and Panama are eligible if they have a developed market listing, such as an ADR or GDR.

Accessibility: The criteria for choosing and weighting constituents are designed to provide optimal tradability and diversification. To ensure liquidity, the largest and most liquid companies are included in the final index membership. Stocks must have a minimum float adjusted market cap of \$US 100 million and a minimum average three-month daily value traded of \$US 2 million to be included in the index. Stocks also must have traded at least 15 days in each of the last six months. The top 30 eligible stocks, by float-adjusted market capitalization, are chosen for the index subject to the constraint that no country can have more than 5 constituents in the Index. The weighting scheme of the Index ensures ample diversification. Weights are based on float-adjusted market capitalization, but are adjusted so that no single stock has a weight of more than 10% and no country has a weight of more than 50% in the Index. Weights are adjusted to ensure that a portfolio size of at least US\$ 200 million can be turned over in a single day, based on historical value traded, assuming 100% participation.

Risks

While there are several compelling arguments in favor of frontier market investing several important risks should be considered.

- Even more so than for other emerging markets, frontier markets remain prone to shocks associated with political and macroeconomic risks.
- Frontier market investing falls in the realm of thematic investing. Investment themes are prone to sharp corrections following reversals in investor sentiments.
- Frontier markets represent a very small fraction of both overall world GDP and global stock market capitalization. Therefore, frontier market investments should be considered in conjunction with a broad, global equity allocation plan.
- The impact of economic growth may take years to reflect in the stock market. Therefore, frontier market investments must be long-term by nature.

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